



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/648,275	08/27/2003	Kenichi Nakatate	Q76815	4434

23373 7590 05/18/2005
SUGHRUE MION, PLLC
2100 PENNSYLVANIA AVENUE, N.W.
SUITE 800
WASHINGTON, DC 20037

EXAMINER

WOOD, KEVIN S

ART UNIT PAPER NUMBER

2874

DATE MAILED: 05/18/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/648,275

Applicant(s)

NAKATATE ET AL.

Examiner

Kevin S. Wood

Art Unit

2874

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-5 and 14-16 is/are rejected.
- 7) ☒ Claim(s) 6-13 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 October 2003 is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 1/13/04 and 10/10/03
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

NON-FINAL REJECTION

Drawings

1. The drawings were received on 10 October 2003. These drawings are objected to for the reason(s) cited below.
2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the twisted portion including protective element, where the protective element comprises a reinforcing pipe, must be shown or the feature(s) canceled from the claim(s). No new matter should be entered. The drawings fail show the reinforcing pipe being part of the twisted portion as claimed in claim 6 (the reinforcing pipe is not twisted in the drawings).

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New

Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

3. Claims 6-13 are objected to because of the following informalities: The claim is indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention, specifically it is unclear how the image fiber body can have a twisted portion, where that twisted portion comprises a protective element, where that protective element comprises a reinforcing pipe, where the reinforcing pipe is adhered to the image fiber body. How can the reinforcing pipe be adhered to the image fiber body, when fiber body comprises the protective element, which comprises the reinforcing pipe? For the purposes of examination, the examiner assumes that the reinforcing pipe is a protective element which is part of the twisted portion of the fiber body and that the adhesive adheres the reinforcing pipe to another portion of the fiber body. Appropriate correction is required.

4. Claims 10-12 are objected to because of the following informalities: Claims 10-12 recites the limitation "the reinforcing pipe" in the body of each claim. There is insufficient antecedent basis for this limitation in the claim. Appropriate correction is required.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1, 2, 5, and 14-16 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 6,148,131 to Geertman.

Referring to claims 1 and 5, the Geertman reference discloses all the limitations of the claimed invention. The Geertman reference discloses an image fiber body (70) having a twisted portion, wherein the rate of twist in the twisted portion is constant, and wherein the fiber body includes a protective portion (78) which is part of the twisted fiber body. See Figure 3 and 4, along with their respective portion of the specification. Also see col. 4, lines 34 through 57, which clearly discloses the twists are a uniformly periodic function of the longitudinal position along the fiber (meaning the rate of twist is constant over a portion of the fiber).

Referring to claim 2, the Geertman reference discloses all the limitations of the claimed invention. The Geertman reference discloses the fiber having a rate of twist in the twisted portion being set at $360^{\circ}/0.33\text{m}$ ($1.08^{\circ}/330\text{mm}$). See col. 4, lines 58-65. This clearly falls in the claimed range of $1^{\circ}/\text{mm}$ to $4000^{\circ}/\text{mm}$.

Referring to claim 14, the Geertman reference discloses all the limitations of the claimed invention. The Geertman reference discloses the fiber having a rate of twist in the twisted portion being set at $360^{\circ}/0.33\text{m}$ ($1.08^{\circ}/330\text{mm}$). It is inherent that this rate

Art Unit: 2874

of twist ensure that the elongated length of the core due to twisting do not exceed four times the length of the original core length.

Referring to claims 15 and 16, the Geertman reference discloses all the limitations of the claimed invention. The Geertman reference discloses an image fiber body (70) having a twisted portion, wherein the rate of twist in the twisted portion is constant, and wherein the fiber body includes a protective portion (78) which is part of the twisted fiber body. See Figure 3 and 4, along with their respective portion of the specification. Also see claim 10, which clearly discloses the twists are uniformly repeating.

The recitation of the fiber being a "fiber scope" has not been given patentable weight because the recitation occurs in the preamble. A preamble is generally not accorded any patentable weight where it merely recites the intended use of a structure, and where the body of the claim does not depend on the preamble for completeness but, instead, the structural limitation are able to stand alone. See *In re Hirao*, 535 F.2d 67, 190 USPQ 15 (CCPA 1976) and *Kropa v. Robie*, 187 F.2d 150, 152, 88 USPQ 478, 481 (CCPA 1951).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

9. Claims 3-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,148,131 to Geertman.

Referring to claim 3, the Geertman reference discloses all the limitations of the claimed invention, except the Geertman reference does not appear to specifically disclose rate of twist in the twisted portion is set in a range from 5°/mm to 100°/mm. Since the Geertman reference does disclose a rate of twist of 360°/0.33m (1.08°/330mm), there would have been a reasonable expectation of producing a workable fiber with a rate of twist within the range from 5°/mm to 100°/mm. It should also be noted that the applicant has not disclosed any unexpected result from using this claimed range. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize a rate of twist within the range from 5°/mm to 100°/mm, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. In re Aller, 105 USPQ 233.

Referring to claim 4, the Geertman reference discloses all the limitations of the claimed invention, except the Geertman reference does not appear to specifically disclose rate of twist in the twisted portion is set in a range from 3°/mm to 400°/mm. Since the Geertman reference does disclose a rate of twist of 360°/0.33m (1.08°/330mm), there would have been a reasonable expectation of producing a workable fiber with a rate of twist within the range from 3°/mm to 400°/mm. It should also be noted that the applicant has not disclosed any unexpected result from using this claimed range. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize a rate of twist within the range from 3°/mm to 400°/mm, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. In re Aller, 105 USPQ 233.

Allowable Subject Matter

10. Claims 6-13 would be allowable if rewritten to overcome all of the objections set forth in this action and to include all of the limitations of the base claim and any intervening claims.

11. The following is a statement of reasons for the indication of allowable subject matter: The prior art does not disclose the combination of all the limitations as claimed. Specifically the prior art does not disclose a twisted reinforcing pipe adhered to the image fiber body with an adhesive.

Conclusion

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin S. Wood whose telephone number is (571) 272-2364. The examiner can normally be reached on Monday-Thursday (7am - 5:30 pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rodney B. Bovernick can be reached on (571) 272-2344. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Kevin S. Wood



AKM ENAYET ULLAH
PRIMARY EXAMINER